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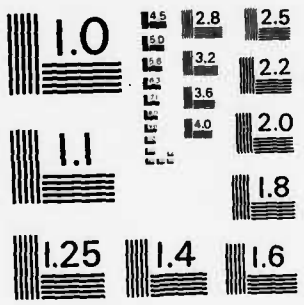

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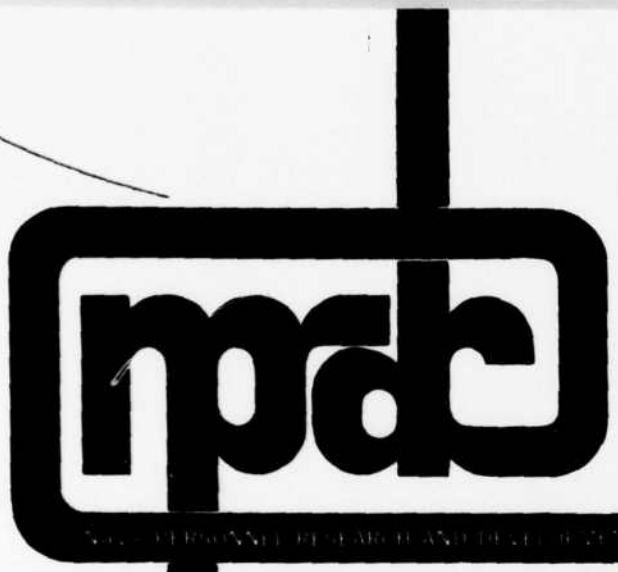

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NAVY RESERVE BILLET COSTS--FY 1980
AN INTERIM REPORT

NPRDC Special Report 80-14 March 1980

NAVY RESERVE BILLET COSTS—FY 1980
AN INTERIM REPORT

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FOREWORD

This effort was conducted in support of Navy Decision Coordinating Paper Z1170-PN, under subproject Z1170-PN.05 (Reducing Manpower Costs) and the sponsorship of the Deputy Chief of Naval Operations (Manpower Personnel, and Training, OP-01). The objective of the subproject is to reduce manpower requirements and associated life cycle costs of new hardware systems. The objective of this effort was to provide decision makers in manpower planning and hardware development offices with Navy reserve officer and enlisted billet cost information. These data support acquisition and life cycle analyses for those situations in which the use of reserve billets is a viable option in the manning of Navy ships or systems. The cost data presented in this report were prepared under contract by B-K Dynamics, Inc. of Rockville, Maryland.

This is the sixth in a series of reports on manpower billet costs reports published by this Center. NPRDC Special Reports 77-16, 78-14, 79-13 and 80-7 provided life cycle Navy enlisted billet costs for FYs 77, 78, 79, and 80 respectively. NPRDC Special Report 79-20 provided similar costs data for Navy officer billets. Subsequent reports, in preparation, will provide updated officer billet costs for FY 1980, and Navy Civil Service billet costs for Wage Board and General Schedule Employee positions.

Appreciation is expressed to CDR Lee S. Mairs, Head, Cost and Economic Analysis Section, Chief of Naval Operations (OP-110C2) for his assistance as advisor to this development effort.

RICHARD C. SORENSON
Director of Programs

SUMMARY

Problem

Manpower cost has become a dominant element in the annual defense budget. As these costs have increased over the years, the need for and interest in identification of annual and life cycle manpower costs has also risen. Billet cost models are required for measuring the economic costs of creating or maintaining billets in the Navy's work force and for conducting various cost effectiveness assessments of manpower (active or reserve officer and enlisted, and civil service) and hardware manpower mixes.

Objective

The objective of this report is to provide hardware developers and manpower managers with specific manpower cost data for Navy officer and enlisted personnel within the Ready Reserve for 1-, 5-, 10-, 15-, and 20-year periods.

Computation of Cost Data

A Reserve Billet Cost Model has been developed that computes the costs of reserve force billets manned with people having requisite qualifications, in terms of the investment and operational cost to the U.S. Government, for each year in the life cycle of a given billet. The resulting cost data are displayed for enlisted personnel using categories created by combining all ratings into occupational groups, and for officer personnel using functional occupational groups keyed to designators.

Recommendations

The annual and life cycle billet costs data provided contained in Appendix B should be used by hardware developers and cost analysts in cases where reserve manpower costs are to be considered in the design or selection process of hardware acquisitions, manpower systems, or organizational concepts. Specific applications should include (1) conducting trade-off studies, such as costing various manning concepts involving numbers, mixes of skills, or types of manpower (reserve and active personnel ratios), (2) comparing manpower and hardware costs for both initial acquisition and life cycle support, and (3) comparing various maintenance support options.

CONTENTS

INTRODUCTION

Problem

As the cost of manpower has increased in recent years, personnel and billet costing has become an increasingly important tool in supporting the programming and planning actions of the Navy. If Navy hardware program managers and manpower planners are to make informed decisions on cost-effective design and manning alternatives, they must have information on the annual and life-cycle costs of specific operator and maintenance billets required by such alternatives. The development of such cost information is one of several major objectives of subproject Z1170-PN.05, Reducing Manpower Costs, under which this research development was conducted.

Purpose

This report has been prepared to provide specific billet costs for enlisted and officer manpower within the Ready Reserve. These costs are produced by the Reserve Billet Cost Model.

Background

The Navy Reserve provides support to and augments the full-time active forces. To ensure that the reserve forces maintain their skills at a usable level and are familiar with new equipment, material, and policies, a degree of active participation is required. This is accomplished by subdividing the reserves into three major organizational components: the Ready, Standby, and Retired Reserves.

The terms "active" and "inactive" can be confusing and ambiguous, particularly when discussed with respect to the regular and reserve forces. In the regular Navy, all participants serve on "active," "uniformed" duty and receive their livelihood from the Navy. Although the reserves, as a whole, are considered an "inactive" force, there are active and inactive categories of reserve duty. "Active" reservists, the so-called "week-end warriors," may hold full-time, nonmilitary jobs, but must participate in a series of drills during the year. These drills consist of classroom or mechanical training, as well as a 2-week period of annual active duty training. "Inactive" reservists do not drill, but are maintained on reserve lists for a variety of reasons.

Drills are computed on the basis of 4-hour time segments, each representing 1 drill period. Thus, "24-drill" reservists participate in training 1 day per month, earning 2 drill credits for each attendance or 24 credits per year. Similarly, "48-drill" reservists participate in training 2 days per month, earning 4 drill credits per month or 48 credits a year; and "60-drill" reservists, 2.5 days a month, earning 5 drill credits per month or 60 credits per year.

In many cases, the reserves serve as a way to begin or end a military career. Some reservists enter the program and may serve at some future time in an active duty status to meet minimum requirements of service or establish supplemental careers. The majority, however, are former active duty personnel who leave active duty, but continue to participate in a reserve program to accumulate retirement credits.

Figure 1 depicts the organizational structure of the reserves and their relative FY79 inventories. The three primary components of the reserves are described in the following paragraphs.

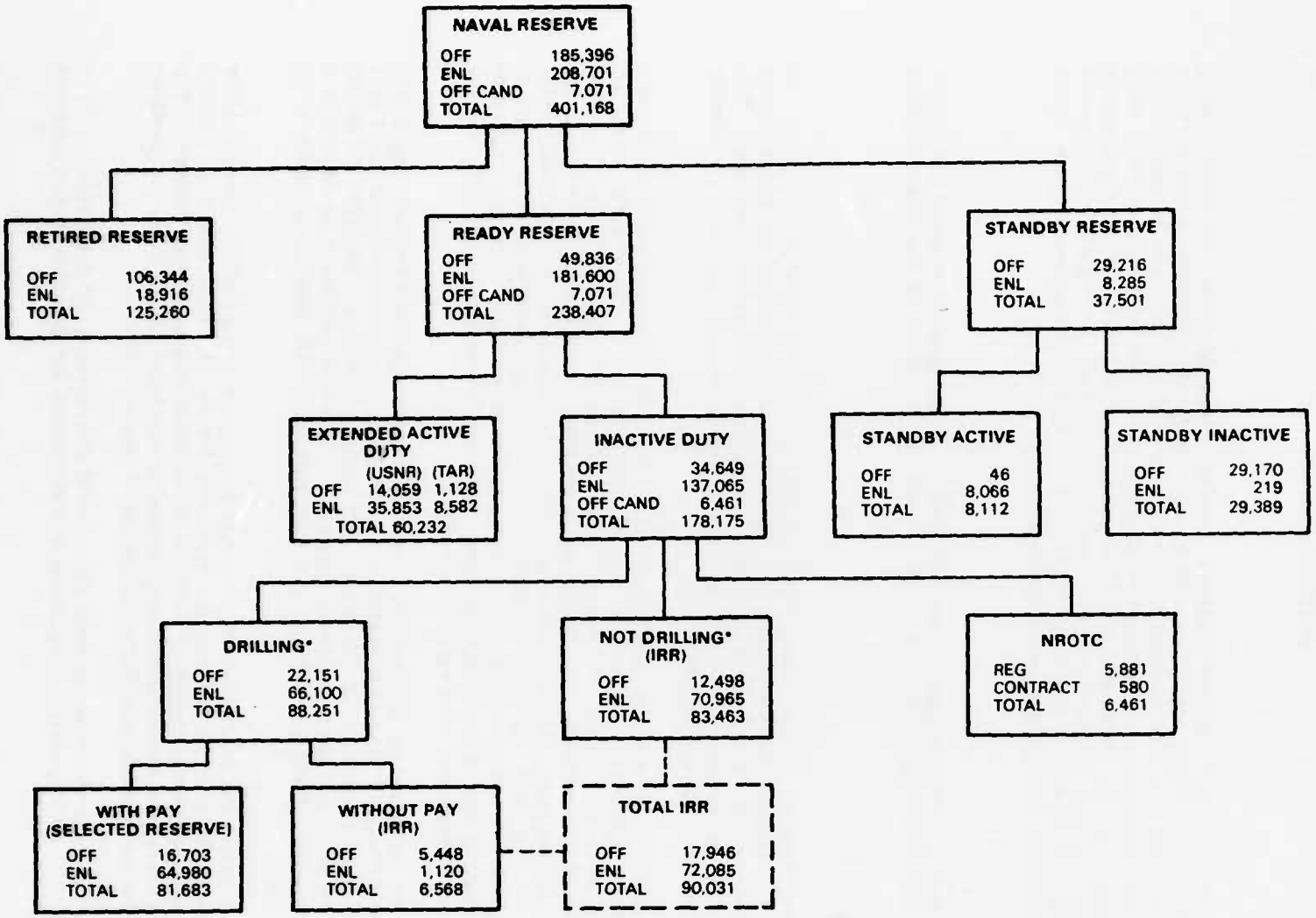

Figure 1. Itemized 1979 reserve levels.

Note. These figures reflect the averages for FY 79.
*Included in reserve cost model.

1. Ready Reserve. The Ready Reserve, which comprises 60 percent of the reserve force, is composed of personnel serving on extended active duty or on inactive duty.

a. The costs and benefits associated with Ready Reservists on extended active duty accrue to the regular Navy; hence, their costs are not considered in the Reserve Billet Cost Model. Some of these reservists participate in the Training and Administration for the Reserves (TAR) program, primarily in billets associated with reserve support functions. In FY79, all but 207 TARs were paid from the Manpower and Personnel-Navy (MPN) budget; hence, their costs were not considered.

b. Ready Reservists on inactive duty serve in the NROTC (not discussed here) or in a drilling or nondrilling status. Those in a drilling status would be readily called to active duty in an emergency, and may be either Selective Reservists (SRs)--paid participants--or Individual Ready Reservists (IRRs)--unpaid participants. SRs participate in active duty for training at a fixed 2 weeks per year, and do accumulate points and time toward eligibility for military retirement. As shown, IRRs may be either in a drilling or nondrilling status. Even though IRRs in a drilling status are not paid, they can accumulate points and time toward retirement, but they must meet minimum requirements as to number of drills and amount of time spent in active duty for training. IRRs may be reserve recruits awaiting initial active duty for training, or members of the Armed Forces Health Professions Scholarship or Officer Training Programs.

Within a concept of national emergency, Ready Reserve members may be called to active duty, with or without their consent, and may be required to serve up to a maximum of 24 consecutive months. Other provisions exist that, in the absence of a war or national emergency, would activate up to 50,000 Selective Reservists for a maximum of 90 days.

2. Standby Reserve. Although members of the Standby Reserve do not serve on active duty, they are assigned to Active or Inactive Status lists. Those on the Active Status list receive no pay or training. Persons may be assigned to the Active Status list if they have been released from active (i.e., full-time) duty and have only a small amount of obligated time remaining, are faced with a personal or community hardship, are in a critical civilian or federal occupation, are within a job category that is already overstaffed in the Ready Reserve, or are unfit to participate in the event of mobilization. If reserve officers have accrued 18 or more years of service, they may be retained until they are eligible for retirement. Units and members of the Active Status list may be ordered to active duty only in time of war, national emergency declared by Congress, or when otherwise authorized by law. The Secretary of Defense must determine that the capability needed is greater than that which could be supplied by the Ready Reserve.

Those on the Inactive Status list are not authorized to participate in either paid or unpaid training for retirement points and they cannot be promoted. They are called to active duty only when the Secretary of Defense determines that the capability needed is greater than that which could be supplied by Ready and Active Status Standby Reservists.

3. Retired Reserve. Members of the Retired Reserve are retired from reserve service and can be called to active duty only by the Act of Congress. After at least 20 years of service, a member can be transferred into the Fleet Reserve, Retired Reserve, or Retired Reserve List.

RESERVE BILLET COST MODEL

Data Source

The key to reserve costs is participation. Thus, the reserve billet cost model was based on only those personnel in the Ready Reserve in a drilling or nondrilling status (see Figure 1). The specific data elements used in computing the costs are itemized in Table 1. Data were obtained primarily from the various budget documents that provide information for the past reporting period as well as justification for, and some detail on, requirements for the upcoming period. After the expenditures were identified, they were distributed to specific ratings/designators wherever possible--a critical step that results in cost differentiation among ratings/designators. Those expenditures that were not applicable to individual ratings/designators were applied equally across all ratings/designators in the annual cost by year or grade element.

Historical data, which traditionally is used in billet cost model development, were not available for use in this development effort due to the various moves made by the Naval Reserve Personnel Center in recent years. This has resulted in some problems in data analysis and manipulation. Moreover, with the active duty Enlisted and Officer Billet Cost Models, strength statistics, inventories, and qualifications counts were comprehensively assembled prior to the modeling effort. In this development effort, many small programs had to be formed by manipulating combinations of elements to obtain a similar level of aggregation. The resulting base level data, when combined with the budget information, provided the distributed costs for the manpower estimations.

Personnel Aggregation

Small number problems were another major concern in this cost model. In cases where individuals ratings and designators within the reserves contain few or no personnel, cost data unique to those groups can have major influences on costs. To compensate for this, individual ratings and designators were aggregated by combining similar categories of personnel. Enlisted ratings were grouped based on categories contained in the Inactive Enlisted Master File, Department of the Navy, Naval Reserve Personnel Center in New Orleans; and Officer designators, according to functional areas. The resulting inventories, which are provided in Appendix A, Table A-1, formed the basis for computing continuance rates, cost distribution, and other statistics.

USER INSTRUCTIONS

Cost Computation

Appendix B provides the specific cost data for annual and life cycle enlisted and officer Ready Reserve billets. Data are presented for (1) both enlisted and officer 48-drill reservists, (2) 60-drill enlisted reservists, and (3) 24-drill officer reservists. Reservist cost were not computed for 60-drill officer reservists and 24-drill enlisted reservists, since the inventories of these groups were not large enough to establish reliable billet costs.

When the user finds the billet cost information for the rating or designator group of interest, he determines (1) the pay grade (E-2 through E-9 for enlisted; 01 through 06 for officers), (2) the number of personnel needed, and (3) the number of years in the life cycle of the system to be manned or the billet to be filled. Most systems have enlisted skill requirements equivalent to pay grades ranging from E-4 (entry level operator/maintainer)

Table 1

Factors Included in Reserve Billet Cost Model Computations

Cost Item[a]	Source[b]
ADMINISTRATIVE DUTY PAY (OFFICERS ONLY)	RPN
AVIATION CAREER INCENTIVE PAY (OFFICERS ONLY)	DoD Pay Manual
BASE PAY	DoD Pay Manual
CLOTHING--INITIAL	RPN, OMNR
COMMAND AND ADMINISTRATION	RPN, OMNR
CHIEF OF NAVAL OPERATIONS	
CHIEF OF NAVAL RESERVE	
COMMANDANT, EIGHTH NAVAL DISTRICT	
BASE OPERATIONS	
DEATH GRATUITY	RPN, OMNR
DENTAL PAY (OFFICERS ONLY)	RPN
DISABILITY AND MEDICAL COSTS	RPN, OMNR
FAMILY SEPARATION	Not Used
FICA--GOVERNMENT CONTRIBUTION	6.02% of first $17,500 from SSA
HAZARDOUS DUTY PAY	RPN
AIR CREW	
NON-CREW	
PARACHUTE	
DEMOLITION	
MEDICAL PAY (OFFICERS ONLY)	RPN
MESSING/SUBSISTENCE ALLOWANCE	RPN, OMNR
PERSONNEL PROCUREMENT	OMN, OMNR
QUARTERS ALLOWANCE	RPN
REENLISTMENT PAY (ENLISTED ONLY)	RPN, OMNR
RETIREMENT PAY	NRPC-Reserve Tapes
SCHOOL TRAINING (O&MN, MPN ONLY)	RMS/NITRAS
SEA PAY (ENLISTED ONLY)	RPN
SUBMARINE PAY	DoD Pay Manual
TRAVEL/TRANSPORTATION PAY	RPN
TUITION AID (ENLISTED ONLY)	RPN, OMNR
UNEMPLOYMENT COMPENSATION	RPN, OMNR

[a]Unless otherwise noted, all costs apply to both officers and enlisted personnel.

[b]Key:

1. RPN--Congressional Budget Submit for FY79: Reserve Personnel, Navy.
2. DoD Pay Manual--DoD Military Pay, Entitlements, Allowance Manual, 1968, as amended.
3. OMNR--Operations and Maintenance-Navy Reserve.
4. NRPC-Reserve Tapes--Naval Reserve Personnel Center-Reserve Tapes.
5. RMS/NITRAS--Resource Management System/Navy Information Training System.

to E-7 (highly experienced evaluator/technician). To illustrate, assume the user decides that (1) one OS E-4 48-drill reservist will be required to operate a system and (2) the system will be operational for 5 years. Then, referring to Appendix A, Table A-1, he finds that the OS rating is grouped within the "Deck" (DEC) enlisted community. If necessary, he can refer to Table A-2, which identifies the OS as an Operations Specialist. Next, referring to Appendix B, Table B-2, he locates the "DEC" Rating Category and pay grade E-4. Reading across the row to the 5 year cost, he finds that the billet cost is set at $10,254.

If the user decides that the system must be staffed by three OS E-4s and one OS E-6, he refers to Table B-2, makes two computations, and adds them together to find the total cost per unit.

Rating	Level	5-Year Life Cycle	No. of Men	Life Cycle Costs per Unit
DEC (OS)	E-4	$10,254	3	$30,762
DEC (OS)	E-6	$12,964	1	$12,964
				$43,726

Next, the user must decide how many hours of each day the system must be manned. For example, if the system is to be operated continuously over a 24-hour period, the initial billet cost estimation per shift for the three E-4s and one E-6 (i.e., $43,726) must be multiplied by three to account for three 8-hour shifts or six 4-hour watches ($43,726 per shift x 3 shifts = $131,178 per unit).

Finally, the user must decide upon maintenance support requirements. For example, if the system in the previous example requires a Data System Technician (DS) at the E-5 level for 8 hours a day and an Electronics Technician (ET) at the E-4 level for 4 hours a day, costs for these personnel must be computed and added to the previous example to determine total life cycle billet costs per unit. Referring to Table A-1, the user finds that both the DS and ET ratings are contained within the Electronics (ELC) community. Then, referring to Table B-2 for the ELC rating category, costs for the two desired ratings and pay grades can be identified and used as noted in the following example:

Rating	Level	5-Year Life Cycle	No. Man/days	Life Cycle Costs per Unit
ELC (DS)	E-5	$11,171	1.0	$ 11,171
ELC (ET)	E-4	$10,154	0.5	5,077
Operator Costs (as determined from previous example)				$131,178
Total billet Life Cycle Cost per Unit				$147,426

Discount Rate Computation

The multiple-year billet cost tables included in Appendix B have been computed using a 10 percent discount rate. According to the Office of Management and Budget Circular A-94,[1] this discount must be applied when projecting costs into future years. The 1-year

[1]Office of Management and Budget Circular A-94. Subj: Discount Rates to be Used in Evaluating Time, Distributed Costs, and Benefits.

cost figures, however, do not reflect a discount or interest rate. Therefore, if the user needs to apply a discount rate other than 10 percent for multiple-year projections, the 1-year costs should be used as the base for such computations. For example, if no discount rate is to be applied and the billet costs for a 10-year period are desired, the 1-year cost figure should be multiplied by 10. The resultant figure will reflect costs based upon FY80 dollars.

If a discount rate other than that reflected in the cost tables in Appendix B needs to be applied, the following formula can be used with the 1-year cost figure:

$$sn = \left[1 - \left(\frac{1}{1+r}\right)^{n}\right]\left[\left(\frac{1+r}{r}\right)(x)\right]$$

Where: s = Billet cost
n = Number of years in billet life
r = Discount rate
x = Billet cost for first year

For example, the billet costs for an Aviation Electrician's Mate (AE), pay grade E-2 (48-drill reservist), for a 5-year period have been computed using the following values:

n = Number of years in billet life = 5
r = Discount rate = 10 percent - .10
x = Billet cost for first year = 2090[2]

AVT (AE, E-2)
(48-drill Reservist)
5-year billet cost
10 percent discount

$$= \left[1 - \left(\frac{1}{1+.10}\right)^{5}\right]\left[\left(\frac{1+.10}{.10}\right)(x)\right]$$

$$= 1 - (.90909)^{5} \times 11 \times 2{,}090$$
$$= (1 - .6209181) \times 11 \times 2{,}090$$
$$= .3790819 \times 11 \times 2{,}090$$
$$= \$8{,}715.09 \text{ or}$$
$$= \$8{,}715$$

RECOMMENDATIONS

The annual and life cycle billet costs data provided contained in Appendix B should be used by hardware developers and cost analysts in cases where reserve manpower costs are to be considered in the design or selection process of hardware acquisitions, manpower systems, or organizational concepts. Specific applications should include (1) conducting trade-off studies, such as costing various manning concepts involving numbers, mixes of skills, or types of manpower (reserve and active personnel ratios), (2) comparing manpower and hardware costs for both initial acquisition and life cycle support, and (3) comparing various maintenance support options.

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[2]Taken from Appendix B, Table B-2.

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APPENDIX A

RESERVE RATING AND DESIGNATOR CONVERSION TABLES

Table A-1

Reserve Designator/Rating Categories
(Ready Reserve)

Community	Designator/Rating	1979[a] Inventory
Officer:		
Other Line Officers	1100, 1130, 1140, 1180, 1190	11,698
Warfare	1110, 1160, 1120, 1170	4,509
Aviation	1300, 1310, 1320, 1350, 1370, 1390, 1510, 1520	9,227
Special Duty Officer	1610, 1620, 1630, 1350, 1370, 1390, 1680, 1690, 1800	4,419
Health Care	1900, 1910, 1920, 1960, 1970, 1980, 2100, 2200, 2900	5,942
Professional	1930, 1940, 1950, 1990, 2300, 2500, 4100	2,723
Supply	3100	2,450
Engineering	1400, 1410, 1440, 1460, 1470, 5100	1,772
LDO/Warrant	6XXX, 7XXX	1,090
		43,830
Enlisted:		
Deck (DEC)	BM, MA, QM, SM, OS, EW, ST, STG, STS, OT	11,801
Ordnance (ORD)	TM, GM, GMM, GMT, GMG, FT, FTG, FTM, FTB, MT, MN	5,317
Electronics (ELC)	ET, DS	3,014
Precision Equipment (PRE)	PI, IM, OM	271
Admin. and Clerical (ADM)	DK, MS, IS, SH, JO, PC, NC, RM, CTT, CTA CTM, CTO, CTR, CTI, YN, LN, PN, DP, SK	29,889
Miscellaneous (MIS)	LI, DM, MU, SN, SA, SR	10,717
Engineering and Hull (ENG)	IC, HT, PM, ML, FN, FA, FR, GSE, GSM, MM, EN, MR, BT, EM	28,341
Construction (CON)	EQ, EO, CM, BU, SW, UT, CN, CA, CR, CU, EA, CE	13,883
Aviation (AVT)	ABH, AE, AM, AMS, AMH, AME, PR, AG, TD, AK, AZ, AF, AV, AD, AT, AX, AW, AO, AQ, AC, AB, ABE, ABF, AS, ASE, ASH, ASM, PH, AN, AA, AR	31,441
Medical (MED)	HM, HN, HA, FR	8,106
Dental (DEN)	DT, DN, DA, DR	1,359
		144,139

[a]These figures reflect actual inventories as of 31 April 1979.

Table A-2

Rating Abbreviations--Titles

Abbreviation	Rating Title
AB	AVIATION BOATSWAIN'S MATE
ABE	Aviation Boatswain's Mate (launching and Recovery Equipment)
ABF	Aviation Boatswain's Mate (Fuels)
ABH	Aviation Boatswain's Mate (Aircraft Handling)
AC	AIR CONTROLMAN
AD	AVIATION MACHINIST'S MATE
AD	Aviation Machinist's Mate (Jet Engine Mechanic)
AD	Aviation Machinist's Mate (Reciprocating Mechanic)
AE	AVIATION ELECTRICIAN'S MATE
AF	AIRCRAFT MAINTENANCEMAN (E-9 only)
AG	AEROGRAPHER'S MATE
AK	AVIATION STOREKEEPER
AM	AVIATION STRUCTURAL MECHANIC
AME	Aviation Structural Mechanic (Safety Equipment)
AMH	Aviation Structural Mechanic (Hydraulics)
AMS	Aviation Structural Mechanic (Structures)
AO	AVIATION ORDNANCEMAN
AQ	AVIATION FIRE CONTROL TECHNICIAN
AS	AVIATION SUPPORT EQUIPMENT TECHNICIAN
ASE	Aviation Support Equipment Technician (Electrical)
ASH	Aviation Support Equipment Technician (Hydraulics and Structures)
ASM	Aviation Support Equipment Technician (Mechanical)
AT	AVIATION ELECTRONICS TECHNICIAN
AV	AVIONICS TECHNICIAN (E-9 only)
AW	AVIATION ANTISUBMARINE WARFARE OPERATOR
AW	Aviation Antisubmarine Warfare Operator (Acoustic)
AW	Aviation Antisubmarine Warfare Operator (Helicopter)
AW	Aviation Antisubmarine Warfare Operator (Non-Acoustic)
AX	AVIATION ANTISUBMARINE WARFARE TECHNICIAN
AZ	AVIATION MAINTENANCE ADMINISTRATIONMAN
BM	BOATSWAIN'S MATE
BT	BOILER TECHNICIAN
BU	BUILDER
CE	CONSTRUCTION ELECTRICIAN
CM	CONSTRUCTION MECHANIC
CT	COMMUNICATIONS TECHNICIAN
CTA	Communications Technician (Administration Branch)
CTI	Communications Technician (Interpretive Branch)
CTM	Communications Technician (Maintenance Branch)
CTO	Communications Technician (Communications Branch)
CTR	Communications Technician (Collection Branch)
CTT	Communications Technician (Technical Branch)

Table A-2 (Continued)

Abbreviation	Rating Title
CU	CONSTRUCTIONMAN (E-9 only)
DK	DISBURSING CLERK
DM	ILLUSTRATOR DRAFTSMAN
DP	DATA PROCESSING TECHNICIAN
DS	DATA SYSTEMS TECHNICIAN
DT	DENTAL TECHNICIAN
DT	Dental Technician (General)
DT	Dental Technician (Prosthodontics)
DT	Dental Technician (Repair)
EA	ENGINEERING AID
EM	ELECTRICIAN'S MATE
EN	ENGINEMAN
EO	EQUIPMENT OPERATOR
EQ	EQUIPMENTMAN (E-9 only)
ET	ELECTRONICS TECHNICIAN
EW	ELECTRONICS WARFARE TECHNICIAN
FT	FIRE CONTROL TECHNICIAN
FTB	Fire Control Technician (Ballistic Missile Fire Control)
FTG	Fire control Technician (Gun Fire Control)
FTM	Fire Control Technician (Surface Missile Fire Control)
GM	GUNNER'S MATE
GMG	Gunner's Mate (Guns)
GMM	Gunner's Mate (Missiles)
GMT	Gunner's Mate (Technician)
GSE	GAS TURBINE SYSTEM TECHNICIAN (Electrical)
GSM	GAS TURBINE SYSTEM TECHNICIAN (Mechanical)
HM	HOSPITAL CORPSMAN
HT	HULL MAINTENANCE TECHNICIAN
IC	INTERIOR COMMUNICATIONS ELECTRICIAN (Includes EMCM)
IM	INSTRUMENTMAN (Includes PICM)
IS	INTELLIGENCE SPECIALIST
JO	JOURNALIST
LI	LITHOGRAPHER
LN	LEGALMAN
MA	MASTER-AT-ARMS
ML	MOLDER
MM	MACHINIST'S MATE
MN	MINEMAN
MR	MACHINERY REPAIRMAN
MS	MESS MANAGEMENT SPECIALIST
MT	MISSILE TECHNICIAN
MU	MUSICIAN
NC	NAVY COUNSELOR
OM	OPTICALMAN (Includes PICM)

Table A-2 (Continued)

Abbreviation	Rating Title
OS	OPERATIONS SPECIALIST
OT	OCEAN SYSTEMS TECHNICIAN
PC	POSTAL CLERK
PH	PHOTOGRAPHER'S MATE
PI	PRECISION INSTRUMENTMAN (E-9 only)
PM	PATTERNMAKER (Includes MLCM)
PN	PERSONNELMAN
PR	AIRCREW SURVIVAL EQUIPMENTMAN
QM	QUARTERMASTER
RM	RADIOMAN
SH	SHIP'S SERVICEMAN
SK	STOREKEEPER
SM	SIGNALMAN
ST	SONAR TECHNICIAN
STG	Sonar Technician (Surface)
STS	Sonar Technician (Submarine)
SW	STEELWORKER (Includes CUCM)
TD	TRADEVMAN
TM	TORPEDOMAN'S MATE
TM	Torpedoman's Mate (Submarine)
TM	Torpedoman's Mate (Surface)
TM	Torpedoman's Mate (Technician)
UT	UTILITIESMAN
YN	YEOMAN

Apprenticeships

The following are combined ratings and rates (pay grades) that identify entry level general career fields.

AR	AVIATIONMAN RECRUIT
AA	AVIATIONMAN APPRENTICE
AN	AVIATIONMAN
CR	CONSTRUCTIONMAN RECRUIT
CA	CONSTRUCTIONMAN APPRENTICE
CN	CONSTRUCTIONMAN
DR	DENTALMAN RECRUIT
DA	DENTALMAN APPRENTICE
DN	DENTALMAN
FR	FIREMAN RECRUIT
FA	FIREMAN APPRENTICE
FN	FIREMAN
HR	HOSPITALMAN RECRUIT
HA	HOSPITALMAN APPRENTICE
HN	HOSPITALMAN
SR	SEAMAN RECRUIT
SA	SEAMAN APPRENTICE
SN	SEAMAN

APPENDIX B

LIFE CYCLE NAVY RESERVE BILLET COSTS

LIST OF TABLES

Table B-1

Life-Cycle Billet Costs by Designator Categories
(48-Drill, Officer)

Community/ Designator Category	Rank	Years[a]				
		1	5	10	15	20
Other Line Officer (1100, 113X, 114X, 118X, 119X)	OLO 0-1	3768.	15712.	25468.	31526.	35287.
	OLO 0-2	4609.	19219.	31152.	38562.	43163.
	OLO 0-3	4645.	19369.	31396.	38863.	43500.
	OLO 0-4	5428.	22634.	36688.	45415.	50833.
	OLO 0-5	6462.	26946.	43677.	54066.	60516.
	OLO 0-6	7555.	31503.	51065.	63211.	70752.
Warfare (111X, 112X, 116X, 117X)	WAR 0-1	4542.	18940.	30700.	38002.	42536.
	WAR 0-2	4282.	17855.	28942.	35826.	40101.
	WAR 0-3	4447.	18543.	30057.	37207.	41646.
	WAR 0-4	5023.	20945.	33951.	42026.	47040.
	WAR 0-5	6045.	25207.	40858.	50577.	56611.
	WAR 0-6	7432.	30990.	50233.	62181.	69600.
Engineering Duty Officer (140X, 141X, 144X, 146X, 147X 170X, 510X)	ENG 0-1	3521.	14682.	23799.	29459.	32974.
	ENG 0-2	3981.	16600.	26908.	33308.	37282.
	ENG 0-3	4437.	18502.	29990.	37123.	41552.
	ENG 0-4	5410.	22559.	36566.	45264.	50664.
	ENG 0-5	6197.	25841.	41886.	51849.	58035.
	ENG 0-6	7490.	31232.	50625.	62667.	70144.
Aviation Officer (130X, 131X, 132X, 135X, 137X 139X, 151X, 152X)[b]	AVT 0-1	4599.	19177.	31085.	38479.	43069.
	AVT 0-2	4792.	19982.	32389.	40093.	44877.
	AVT 0-3	5108.	21300.	34525.	42737.	47836.
	AVT 0-4	5869.	24473.	39669.	49104.	54963.
	AVT 0-5	6792.	28322.	45907.	56827.	63607.
	AVT 0-6	7502.	31282.	50706.	62767.	70256.
Professional (193X, 194X, 195X, 199X, 230X, 250X, 410X)	PRO 0-1	3882.	16187.	26239.	32480.	36355.
	PRO 0-2	4244.	17697.	28685.	35508.	39745.
	PRO 0-3	4547.	18960.	30733.	38043.	42582.
	PRO 0-4	5369.	22388.	36289.	44921.	50280.
	PRO 0-5	6378.	26595.	43109.	53363.	59730.
	PRO 0-6	7499.	31270.	50686.	62742.	70228.

[a]Cost figures for 5, 10, 15, and 20 years reflect a 10 percent discount rate. If discounted costs are not desired, use the "1" year cost multiplied by the number of years.

[b]Costs of aircraft designed and operated specifically for training have not been considered in computing costs for the 1300 series designators.

Table B-1 (Continued)

Community/ Designator Category	Rank	Years[a]				
		1	5	10	15	20
Special Duty Officer (161X, 162X, 163X, 164X, 165X, 167X, 168X, 169X)	SDO 0-1	4132.	17230.	27928.	34571.	38696.
	SDO 0-2	4183.	17443.	28273.	34998.	39174.
	SDO 0-3	4718.	19673.	31889.	39474.	44184.
	SDO 0-4	5444.	22701.	36796.	45548.	50983.
	SDO 0-5	6422.	26779.	43407.	53731.	60142.
	SDO 0-6	7508.	31307.	50747.	62817.	70312.
Supply Corps Officer (310X)	SUP 0-1	7902.	32950.	53410.	66114.	74002.
	SUP 0-2	4391.	18310.	29679.	36738.	41122.
	SUP 0-3	4618.	19256.	31213.	38638.	43247.
	SUP 0-4	5429.	22638.	36695.	45423.	50842.
	SUP 0-5	6386.	26629.	43163.	53430.	59805.
	SUP 0-6	7524.	31374.	50855.	62951.	70462.
Health Care Officer (190X, 191X, 192X, 196X, 197X, 198X, 210X, 220X, 290X)	HEL 0-1	3918.	16338.	26482.	32781.	36692.
	HEL 0-2	4305.	17951.	29098.	36019.	40316.
	HEL 0-3	4547.	18960.	30733.	38043.	42582.
	HEL 0-4	5203.	21696.	35167.	43532.	48726.
	HEL 0-5	6416.	26754.	43366.	53681.	60086.
	HEL 0-6	7656.	31925.	51747.	64056.	71698.
Former Enlisted (LDO/WARRANT) (6XXX, 7XXX)	FEN 0-1	3967.	16542.	26813.	33191.	37151.
	FEN 0-2	4415.	18410.	29841.	36939.	41346.
	FEN 0-3	5004.	20866.	33822.	41867.	46862.
	FEN 0-4	5464.	22784.	36931.	45716.	51170.
	FEN 0-5	6309.	26308.	42643.	52786.	59084.
	FEN 0-6	0.	0.	0.	0.	0.

[a]Cost figures for 5, 10, 15, and 20 years reflect a 10 percent discount rate. If discounted costs are not desired, use the "1" year cost multiplied by the number of years.

Table B-2

Life Cycle Billet Costs by Rating Categories and Pay Grade
(48-Drill, Enlisted)

Rating Category	Pay Grade	Years[a]				
		1	5	10	15	20
ADM	E-2	2092.	8723.	14140.	17503.	19592.
ADM	E-3	2332.	9724.	15762.	19511.	21839.
ADM	E-4	2502.	10433.	16911.	20934.	23431.
ADM	E-5	2714.	11317.	18344.	22707.	25417.
ADM	E-6	3101.	12931.	20960.	25945.	29041.
ADM	E-7	3440.	14344.	23251.	28782.	32215.
ADM	E-8	3841.	16016.	25961.	32137.	35971.
ADM	E-9	4505.	18785.	30449.	37692.	42189.
AVT	E-2	2090.	8715.	14126.	17486.	19573.
AVT	E-3	2336.	9741.	15789.	19545.	21877.
AVT	E-4	2520.	10508.	17033.	21084.	23600.
AVT	E-5	2683.	11188.	18135.	22448.	25126.
AVT	E-6	3095.	12906.	20919.	25895.	28985.
AVT	E-7	3527.	14707.	23839.	29509.	33030.
AVT	E-8	3903.	16275.	26381.	32655.	36551.
AVT	E-9	4557.	19002.	30801.	38127.	42676.
CON	E-2	1979.	8252.	13376.	16558.	18533.
CON	E-3	2231.	9303.	15079.	18666.	20893.
CON	E-4	2431.	10137.	16431.	20339.	22766.
CON	E-5	2673.	11146.	18067.	22364.	25033.
CON	E-6	3030.	12635.	20480.	25351.	28376.
CON	E-7	3500.	14595.	23657.	29284.	32777.
CON	E-8	4049.	16884.	27367.	33877.	37919.
CON	E-9	4419.	18427.	29868.	36973.	41384.
DEC	E-2	2057.	8577.	13903.	17210.	19264.
DEC	E-3	2285.	9528.	15444.	19118.	21399.
DEC	E-4	2459.	10254.	16620.	20574.	23028.
DEC	E-5	2705.	11279.	18283.	22632.	25332.
DEC	E-6	3109.	12964.	21014.	26012.	29116.
DEC	E-7	3568.	14878.	24116.	29852.	33414.
DEC	E-8	4127.	17209.	27895.	34529.	38649.
DEC	E-9	4487.	18710.	30328.	37541.	42021.
DEN	E-2	1971.	8219.	13322.	16491.	18458.
DEN	E-3	2186.	9115.	14775.	18290.	20472.
DEN	E-4	2347.	9787.	15863.	19637.	21980.
DEN	E-5	2600.	10842.	17574.	21753.	24349.
DEN	E-6	2952.	12309.	19953.	24699.	27645.
DEN	E-7	3481.	14515.	23528.	29125.	32599.
DEN	E-8	3829.	15966.	25880.	32036.	35858.
DEN	E-9	4205.	17534.	28422.	35182.	39380.
ELC	E-2	2056.	8573.	13897.	17202.	19254.
ELC	E-3	2278.	9499.	15397.	19059.	21333.
ELC	E-4	2435.	10154.	16458.	20373.	22804.
ELC	E-5	2679.	11171.	18107.	22414.	25089.
ELC	E-6	3043.	12689.	20568.	25460.	28498.
ELC	E-7	3450.	14386.	23319.	28865.	32309.
ELC	E-8	3759.	15675.	25407.	31450.	35203.
ELC	E-9	4255.	17743.	28760.	35600.	39848.

[a]Cost figures for 5, 10, 15, and 20 years reflect a 10 percent discount rate. If discounted costs are not desired, use the "1" year cost multiplied by the number of years.

Table B-2 (Continued)

Life Cycle Billet Costs by Rating Categories and Pay Grade
(48-Drill, Enlisted)

Rating Category	Pay Grade	Years[a]				
		1	5	10	15	20
ENG	E-2	2048.	8540.	13843.	17135.	19179.
ENG	E-3	2285.	9528.	15444.	19118.	21399.
ENG	E-4	2470.	10300.	16695.	20666.	23131.
ENG	E-5	2657.	11079.	17959.	22230.	24883.
ENG	E-6	3144.	13110.	21250.	26305.	29443.
ENG	E-7	3443.	14357.	23271.	28807.	32244.
ENG	E-8	3802.	15854.	25698.	31810.	35606.
ENG	E-9	4436.	18498.	29983.	37115.	41543.
		1	5	10	15	20
MED	E-2	2006.	8365.	13559.	16784.	18786.
MED	E-3	2243.	9353.	15161.	18767.	21006.
MED	E-4	2421.	10095.	16364.	20256.	22673.
MED	E-5	2598.	10833.	17560.	21737.	24330.
MED	E-6	3072.	12810.	20764.	25703.	28769.
MED	E-7	3546.	14786.	23968.	29668.	33208.
MED	E-8	3813.	15900.	25772.	31902.	35709.
MED	E-9	4481.	18685.	30287.	37491.	41964.
		1	5	10	15	20
MIS	E-2	2011.	8386.	13592.	16825.	18833.
MIS	E-3	2268.	9457.	15330.	18976.	21240.
MIS	E-4	2401.	10012.	16228.	20088.	22485.
MIS	E-5	2637.	10996.	17824.	22063.	24695.
MIS	E-6	2963.	12355.	20027.	24791.	27748.
MIS	E-7	3386.	14119.	22886.	28330.	31710.
MIS	E-8	3695.	15408.	24975.	30915.	34604.
MIS	E-9	4215.	17576.	28489.	35266.	39473.
		1	5	10	15	20
ORD	E-2	2055.	8569.	13890.	17194.	19245.
ORD	E-3	2260.	9424.	15275.	18909.	21165.
ORD	E-4	2415.	10070.	16323.	20206.	22616.
ORD	E-5	2579.	10754.	17432.	21578.	24152.
ORD	E-6	3091.	12889.	20892.	25862.	28947.
ORD	E-7	3473.	14482.	23474.	29058.	32525.
ORD	E-8	3835.	15991.	25921.	32086.	35915.
ORD	E-9	4425.	18452.	29909.	37023.	41440.
PRE	E-2	2019.	8419.	13647.	16892.	18908.
PRE	E-3	2219.	9253.	14998.	18566.	20781.
PRE	E-4	2350.	9799.	15884.	19662.	22008.
PRE	E-5	2525.	10529.	17067.	21126.	23647.
PRE	E-6	2919.	12172.	19730.	24422.	27336.
PRE	E-7	3356.	13994.	22683.	28079.	31429.
PRE	E-8	3633.	15149.	24556.	30396.	34023.
PRE	E-9	4134.	17238.	27942.	34588.	38715.

[a]Cost figures for 5, 10, 15, and 20 years reflect a 10 percent discount rate. If discounted costs are not desired, use the "1" year cost multiplied by the number of years.

Table B-3

Life Cycle Billet Costs by Designator Categories
(24-Drill, Officer)

Community/ Designator Category	Rank	Years[a]				
		1	5	10	15	20
Other Line Officer (1100, 113X, 114X, 118X, 119X)	OLO O-1	3092.	12893.	20899.	25870.	28956.
	OLO O-2	3558.	14836.	24049.	29769.	33321.
	OLO O-3	3355.	13990.	22677.	28070.	31419.
	OLO O-4	3749.	15633.	25340.	31367.	35109.
	OLO O-5	4411.	18393.	29814.	36906.	41309.
	OLO O-6	5188.	21633.	35066.	43407.	48585.
Warfare (111X, 112X, 116X, 117X)	WAR O-1	3705.	15449.	25042.	30999.	34697.
	WAR O-2	3215.	13406.	21730.	26899.	30108.
	WAR O-3	3159.	13173.	21352.	26430.	29584.
	WAR O-4	3506.	14620.	23697.	29334.	32834.
	WAR O-5	4166.	17372.	28158.	34856.	39014.
	WAR O-6	5075.	21162.	34302.	42461.	47527.
Engineering Duty Officer (140X, 141X, 144X, 146X, 147X, 170X, 510X)	ENG O-1	2682.	11184.	18128.	22440.	25117.
	ENG O-2	2866.	11951.	19371.	23979.	26840.
	ENG O-3	3145.	13114.	21257.	26313.	29453.
	ENG O-4	3750.	15637.	25346.	31375.	35119.
	ENG O-5	4262.	17772.	28807.	35659.	39913.
	ENG O-6	5079.	21179.	34329.	42495.	47565.
Aviation Officer (130X, 131X, 132X, 135X, 137X, 139X, 151X, 152X)[b]	AVT O-1	3595.	14991.	24299.	30078.	33667.
	AVT O-2	3490.	14553.	23589.	29200.	32684.
	AVT O-3	3537.	14749.	23907.	29593.	33124.
	AVT O-4	4015.	16742.	27138.	33592.	37600.
	AVT O-5	4610.	19223.	31159.	38571.	43172.
	AVT O-6	5223.	21779.	35302.	43699.	48913.
Professional (193X, 194X, 195X, 199X, 230X, 250X, 410X)	PRO O-1	3025.	12614.	20446.	25309.	28329.
	PRO O-2	3179.	13256.	21487.	26598.	29771.
	PRO O-3	3292.	13727.	22251.	27543.	30829.
	PRO O-4	3740.	15595.	25279.	31292.	35025.
	PRO O-5	4377.	18252.	29584.	36621.	40990.
	PRO O-6	5033.	20987.	34018.	42110.	47134.
Special Duty Officer (161X, 162X, 163X, 164X, 165X, 167X, 168X, 169X)	SDO O-1	3285.	13698.	22203.	27485.	30764.
	SDO O-2	3061.	12764.	20689.	25611.	28666.
	SDO O-3	3347.	13957.	22623.	28003.	31345.
	SDO O-4	3785.	15783.	25583.	31668.	35446.
	SDO O-5	4425.	18452.	29909.	37023.	41440.
	SDO O-6	5163.	21529.	34897.	43197.	48351.

[a]Cost figures for 5, 10, 15, and 20 years reflect a 10 percent discount rate. If discounted costs are not desired, use the "1" year cost multiplied by the number of years.

[b]Costs of aircraft designed and operated specifically for training have not been considered in computing costs for the 1300 series designators.

Table B-3 (Continued)

Life Cycle Billet Costs by Designator Categories
(24-Drill, Officer)

Community/ Designator Category	Rank	Years[a]				
		1	5	10	15	20
Supply Corps Officer (310X)	SUP O-1	7234.	30165.	48895.	60525.	67746.
	SUP O-2	3326.	13869.	22481.	27828.	31148.
	SUP O-3	3274.	13652.	22129.	27393.	30661.
	SUP O-4	3749.	15633.	25340.	31367.	35109.
	SUP O-5	4356.	18164.	29442.	36445.	40794.
	SUP O-6	5115.	21329.	34572.	42796.	47902.
Health Care Officer (192X, 196X, 197X, 198X, 210X, 220X, 290X)	HEL O-1	3077.	12831.	20798.	25744.	28816.
	HEL O-2	3261.	13598.	22041.	27284.	30539.
	HEL O-3	3267.	13623.	22082.	27334.	30595.
	HEL O-4	3536.	14745.	23900.	29585.	33115.
	HEL O-5	4297.	17918.	29044.	35952.	40241.
	HEL O-6	5062.	21108.	34214.	42352.	47405.
Former Enlisted (LDO/WARRANT) (6XXX, 7XXX)	FEN O-1	2860.	11926.	19331.	23929.	26784.
	FEN O-2	3142.	13102.	21237.	26288.	29425.
	FEN O-3	3509.	14632.	23717.	29359.	32862.
	FEN O-4	3790.	15804.	25617.	31710.	35493.
	FEN O-5	4314.	17989.	29158.	36094.	40400.
	FEN O-6	0.	0.	0.	0.	0.

[a]Cost figures for 5, 10, 15, and 20 years reflect a 10 percent discount rate. If discounted costs are not desired, use the "1" year cost multiplied by the number of years.

Table B-4

Life Cycle Billet Costs by Rating Categories and Pay Grade
(60-Drill, Enlisted)

Rating Category	Pay Grade	Years[a]				
		1	5	10	15	20
ADM	E-2	2328.	9707.	15735.	19478.	21802.
ADM	E-3	2615.	10904.	17675.	21879.	24489.
ADM	E-4	2816.	11742.	19033.	23561.	26372.
ADM	E-5	3070.	12801.	20750.	25686.	28750.
ADM	E-6	3525.	14699.	23826.	29493.	33011.
ADM	E-7	3928.	16379.	26550.	32864.	36786.
ADM	E-8	4402.	18356.	29753.	36830.	41225.
ADM	E-9	5192.	21650.	35093.	43440.	48623.
AVT	E-2	2317.	9662.	15661.	19386.	21699.
AVT	E-3	2637.	10996.	17824.	22063.	24695.
AVT	E-4	2840.	11842.	19196.	23761.	26596.
AVT	E-5	3022.	12601.	20426.	25284.	28301.
AVT	E-6	3461.	14432.	23393.	28957.	32412.
AVT	E-7	3944.	16446.	26658.	32998.	36935.
AVT	E-8	4392.	18314.	29686.	36747.	41131.
AVT	E-9	5161.	21521.	34883.	43181.	48333.
CON	E-2	2189.	9128.	14796.	18315.	20500.
CON	E-3	2491.	10387.	16837.	20841.	23328.
CON	E-4	2727.	11371.	18432.	22816.	25538.
CON	E-5	3015.	12572.	20379.	25226.	28235.
CON	E-6	3436.	14328.	23224.	28748.	32178.
CON	E-7	3997.	16667.	27016.	33442.	37432.
CON	E-8	4651.	19394.	31436.	38914.	43556.
CON	E-9	5089.	21220.	34397.	42578.	47658.
DEC	E-2	2280.	9507.	15411.	19076.	21352.
DEC	E-3	2556.	10658.	17276.	21385.	23937.
DEC	E-4	2762.	11517.	18668.	23109.	25866.
DEC	E-5	3053.	12731.	20635.	25544.	28591.
DEC	E-6	3530.	14720.	23859.	29535.	33058.
DEC	E-7	4080.	17013.	27577.	34136.	38209.
DEC	E-8	4743.	19778.	32058.	39683.	44418.
DEC	E-9	5167.	21546.	34924.	43231.	48389.
DEN	E-2	2180.	9090.	14735.	18239.	20416.
DEN	E-3	2437.	10162.	16472.	20390.	22822.
DEN	E-4	2630.	10967.	17776.	22004.	24630.
DEN	E-5	2927.	12205.	19784.	24489.	27411.
DEN	E-6	3343.	13940.	22595.	27970.	31307.
DEN	E-7	3975.	16575.	26867.	33258.	37226.
DEN	E-8	4388.	18297.	29659.	36713.	41093.
DEN	E-9	4834.	20157.	32673.	40445.	45270.
ELC	E-2	2281.	9511.	15417.	19084.	21361.
ELC	E-3	2554.	10650.	17263.	21369.	23918.
ELC	E-4	2744.	11442.	18547.	22958.	25697.
ELC	E-5	3020.	12593.	20412.	25267.	28282.
ELC	E-6	3452.	14394.	23332.	28882.	32328.
ELC	E-7	3935.	16408.	26597.	32923.	36851.
ELC	E-8	4305.	17951.	29098.	36019.	40316.
ELC	E-9	4892.	20399.	33065.	40930.	45813.

[a]Cost figures for 5, 10, 15, and 20 years reflect a 10 percent discount rate. If discounted costs are not desired, use the "1" year cost multiplied by the

Table B-4 (Continued)

Life Cycle Billet Costs by Rating Categories and Pay Grade
(60-Drill, Enlisted)

Rating Category	Pay Grade	Years[a]				
		1	5	10	15	20
ENG	E-2	2271.	9470.	15350.	19001.	21268.
ENG	E-3	2555.	10654.	17269.	21377.	23927.
ENG	E-4	2773.	11563.	18743.	23201.	25969.
ENG	E-5	2997.	12497.	20257.	25075.	28067.
ENG	E-6	3580.	14928.	24197.	29953.	33527.
ENG	E-7	3930.	16388.	26563.	32881.	36804.
ENG	E-8	4356.	18164.	29442.	36445.	40794.
ENG	E-9	5111.	21312.	34545.	42762.	47864.
MED	E-2	2227.	9286.	15052.	18633.	20856.
MED	E-3	2509.	10462.	16958.	20992.	23497.
MED	E-4	2723.	11355.	18405.	22783.	25501.
MED	E-5	2936.	12243.	19845.	24565.	27496.
MED	E-6	3487.	14540.	23569.	29175.	32656.
MED	E-7	4052.	16896.	27388.	33902.	37947.
MED	E-8	4369.	18218.	29530.	36554.	40916.
MED	E-9	5164.	21533.	34904.	43206.	48361.
MIS	E-2	2229.	9295.	15066.	18649.	20875.
MIS	E-3	2539.	10587.	17161.	21243.	23778.
MIS	E-4	2685.	11196.	18148.	22465.	25145.
MIS	E-5	2967.	12372.	20054.	24824.	27786.
MIS	E-6	3352.	13977.	22656.	28045.	31391.
MIS	E-7	3858.	16087.	26076.	32279.	36130.
MIS	E-8	4226.	17622.	28564.	35358.	39576.
MIS	E-9	4845.	20203.	32748.	40537.	45373.
ORD	E-2	2276.	9491.	15384.	19043.	21315.
ORD	E-3	2525.	10529.	17067.	21126.	23647.
ORD	E-4	2710.	11300.	18317.	22674.	25379.
ORD	E-5	2907.	12122.	19649.	24322.	27224.
ORD	E-6	3511.	14640.	23731.	29376.	32880.
ORD	E-7	3966.	16538.	26806.	33182.	37141.
ORD	E-8	4390.	18306.	29672.	36730.	41112.
ORD	E-9	5095.	21245.	34437.	42628.	47714.
PRE	E-2	2237.	9328.	15120.	18716.	20949.
PRE	E-3	2466.	10283.	16668.	20632.	23094.
PRE	E-4	2621.	10929.	17715.	21929.	24546.
PRE	E-5	2829.	11797.	19121.	23669.	26493.
PRE	E-6	3294.	13736.	22264.	27560.	30848.
PRE	E-7	3816.	15912.	25792.	31927.	35737.
PRE	E-8	4145.	17284.	28016.	34680.	38818.
PRE	E-9	4749.	19803.	32099.	39734.	44474.

[a]Cost figures for 5, 10, 15, and 20 years reflect a 10 percent discount rate. If discounted costs are not desired, use the "1" year cost multiplied by the number of years.

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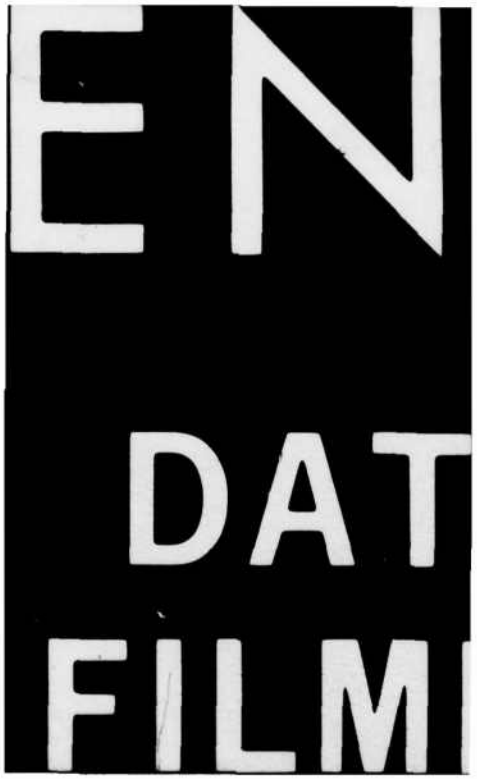
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FN	FIREMAN
HR	HOSPITALMAN RECRUIT
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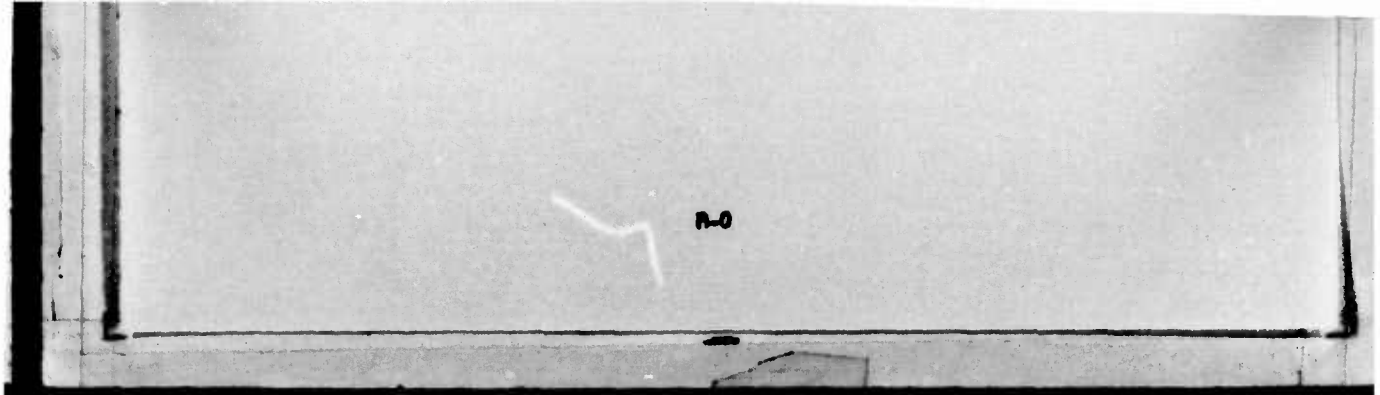

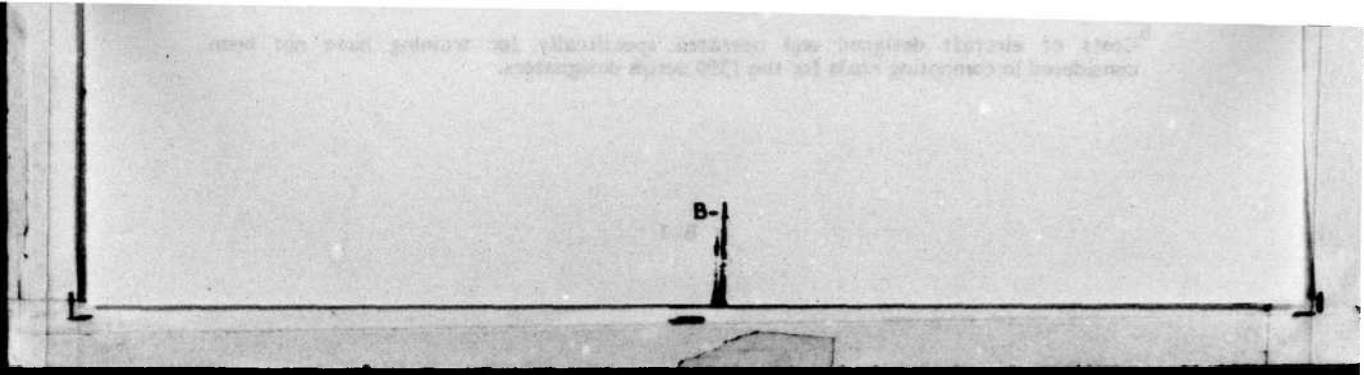
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DEN	E-6	3343.	13940.	22595.	27970.	31307.
DEN	E-7	3975.	16575.	26867.	33258.	37226.
DEN	E-8	4388.	18297.	29659.	36713.	41093.
DEN	E-9	4834.	20157.	32673.	40445.	45270.
ELC	E-2	2281.	9511.	15417.	19084.	21361.
ELC	E-3	2554.	10650.	17263.	21369.	23918.
ELC	E-4	2744.	11442.	18547.	22958.	25697.
ELC	E-5	3020.	12593.	20412.	25267.	28282.
ELC	E-6	3452.	14394.	23332.	28882.	32328.
ELC	E-7	3935.	16408.	26597.	32923.	36851.
ELC	E-8	4305.	17951.	29098.	36019.	40316.
ELC	E-9	4892.	20399.	33065.	40930.	45813.

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PRE	E-5	2829.	11797.	[illegible]	27560.	30848.
PRE	E-6	3294.	13736.	22264.	31927.	35737.
PRE	E-7	3816.	15912.	25792.	34680.	38818.
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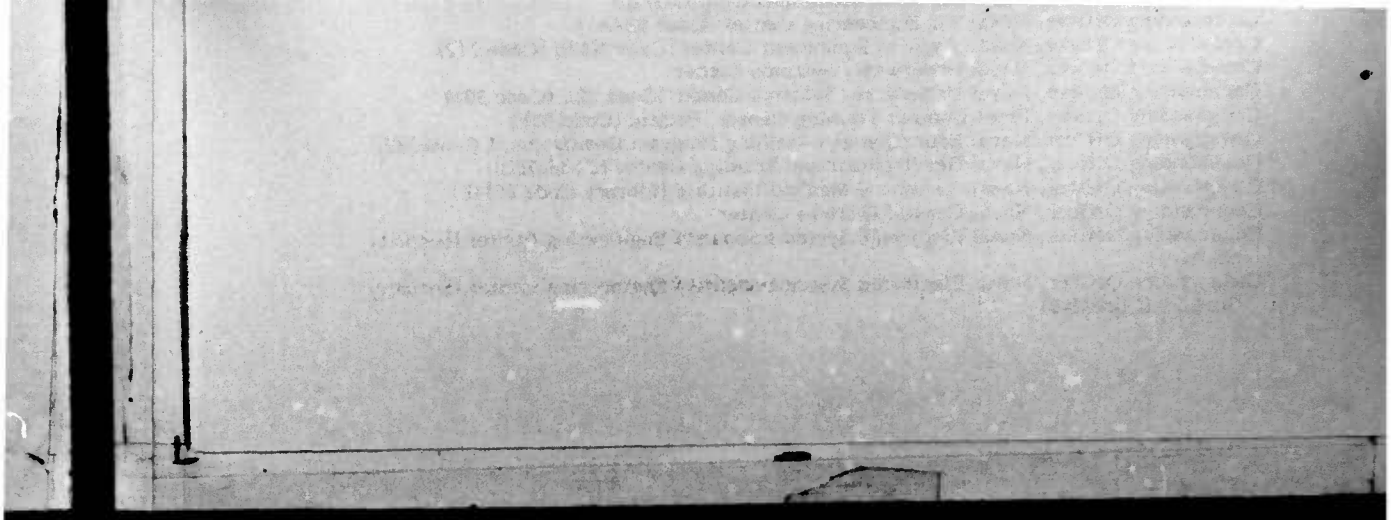

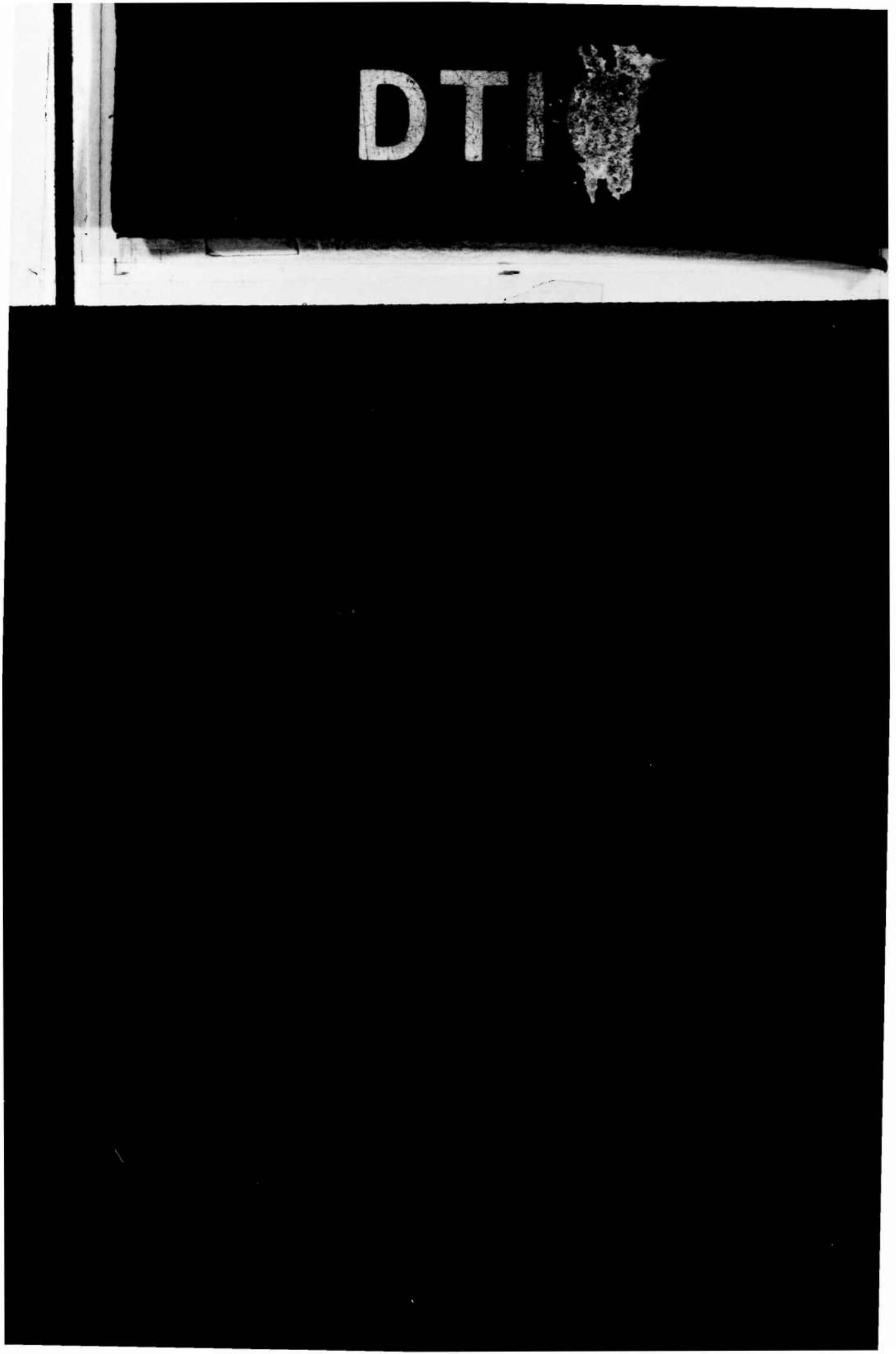
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